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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,503	09/24/2001	Takayuki Shimizu	1614.1192	7233

21171 7590 09/20/2006

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
PHAN, HANH	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/960,503	SHIMIZU, TAKAYUKI	
	Examiner	Art Unit	
	Hanh Phan	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6 and 8-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1 and 6* is/are allowed.

6)☒ Claim(s) *8-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/08/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 06/23/2006.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 1 and 2 in view of Fishman et al (US Patent No. 7,061,657).

Regarding claim 8, Prior Art Figures 1 and 2 teaches an apparatus comprising:

a multiplexing unit (i.e., WDM MUX/DEMUX, Prior Art Figs. 1 and 2) that receives a first plurality of optical client signals, and individually receives at least one other optical client signal provided to the multiplexing unit through at least one transponder, and that wavelength division multiplexes together the first plurality of optical client signals and the individually received at least one other optical client signal, to thereby output a wavelength division multiplexed light which comprises the first plurality of

optical client signals and the individually received at least one other optical client signal (see Prior Art Figures 1 and 2);

a separating unit (i.e., WDM MUX/DEMUX, Prior Art Figs. 1 and 2) that receives a wavelength division multiplexed signal comprising a second plurality of optical client signals and a third plurality of optical client signals, separates the second plurality of optical client signals from the third plurality of optical client signals,

wherein the separating unit (i.e., WDM MUX/DEMUX, Prior Art Figs. 1 and 2) transmits the separated second plurality of optical client signals to a place which is different from where the third plurality of optical client is transmitted (see Prior Art Figures 1 and 2).

Prior Art Figures 1 and 2 differs from claim 8 in that it does not specifically teach the first plurality of optical client signals are multiplexed as a WDM provided to the multiplexing unit and keeping the wavelengths of the second plurality of optical client signals multiplexed together after they are separated from the separating unit. However, Fishman, from the same field of endeavor, likewise teaches multi-channel optical communication system (Figure 1). Fishman further teaches the first plurality of optical client signals are multiplexed as a WDM provided to the multiplexing unit and keeping the wavelengths of the second plurality of optical client signals multiplexed together after they are separated from the separating unit (i.e., Figure 1, col. 1, lines 50-58 and col. 5, lines 9-45). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the first plurality of optical client signals are multiplexed as a WDM provided to the multiplexing unit and

keeping the wavelengths of the second plurality of optical client signals multiplexed together after they are separated from the separating unit as taught by Fishman in the system of Prior Art Figures 1 and 2. One of ordinary skill in the art would have been motivated to do this since allowing to provide an optical communication system with high speed and high capacity.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 1 and 2 in view of Fishman et al (US Patent No. 7,061,657) and further in view of Toyohara (US Patent No. 6,271,948).

Regarding claim 9, Prior Art Figures 1 and 2 as modified by Fishman teaches all the aspects of the claimed invention except fails to teach an amplifier collectively optically amplifying the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit. However, Toyohara in US Patent No. 6,271,948 teaches an amplifier collectively optically amplifying the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit (Fig. 3, col. 3, lines 25-52). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the amplifier collectively optically amplifying the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit as taught by Toyohara in the system of Prior Art Figures 1 and 2 modified by Fishman. One of ordinary skill in the art would have been motivated to do this since allowing

compensating for losses introduced by the transmission fiber and increasing the power level of the signal to a desired level.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 1 and 2 in view of Fishman et al (US Patent No. 7,061,657) and further in view of Zhou et al (US Patent No. 6,445,850).

Regarding claim 10, Prior Art Figures 1 and 2 as modified by Fishman teaches all the aspects of the claimed invention except fails to teach a compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit. However, Zhou in US Patent No. 6,445,850 teaches a compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit (Figs. 2c, col. 9, lines 25-50). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit as taught by Zhou in the system of Prior Art Figures 1 and 2 modified by Fishman. One of ordinary skill in the art would have been motivated to do this since allowing compensating the dispersion of the optical signals.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 1 and 2 and Fishman et al (US Patent No. 7,061,657) in view of Toyohara (US Patent No. 6,271,948) and further in view of Zhou et al (US Patent No. 6,445,850).

Regarding claim 11, Prior Art Figures 1 and 2 as modified by Fishman and Toyohara teaches all the aspects of the claimed invention except fails to teach a compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit. However, Zhou in US Patent No. 6,445,850 teaches a compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit (Figs. 2c, col. 9, lines 25-50). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit as taught by Zhou in the system of Prior Art Figures 1 and 2 modified by Fishman and Toyohara. One of ordinary skill in the art would have been motivated to do this since allowing compensating the dispersion of the optical signals.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 1 and 2 in view of Toyohara (US Patent No. 6,271,948).

Regarding claim 8, Prior Art Figures 1 and 2 teaches an apparatus comprising:

a multiplexing unit (i.e., WDM MUX/DEMUX, Prior Art Figs. 1 and 2) that receives a first plurality of optical client signals, and individually receives at least one other optical client signal provided to the multiplexing unit through at least one transponder, and that wavelength division multiplexes together the first plurality of optical client signals and the individually received at least one other optical client signal, to thereby output a wavelength division multiplexed light which comprises the first plurality of optical client signals and the individually received at least one other optical client signal (see Prior Art Figures 1 and 2);

a separating unit (i.e., WDM MUX/DEMUX, Prior Art Figs. 1 and 2) that receives a wavelength division multiplexed signal comprising a second plurality of optical client signals and a third plurality of optical client signals, separates the second plurality of optical client signals from the third plurality of optical client signals,

wherein the separating unit (i.e., WDM MUX/DEMUX, Prior Art Figs. 1 and 2) transmits the separated second plurality of optical client signals to a place which is different from where the third plurality of optical client is transmitted (see Prior Art Figures 1 and 2).

Prior Art Figures 1 and 2 differs from claim 8 in that it does not specifically teach the first plurality of optical client signals are multiplexed as a WDM provided to the multiplexing unit and keeping the wavelengths of the second plurality of optical client signals multiplexed together after they are separated from the separating unit. However, Toyohara, from the same field of endeavor, likewise teaches multi-channel optical communication system (Figure 3). Toyohara further teaches the first plurality of optical

client signals are multiplexed as a WDM provided to the multiplexing unit and keeping the wavelengths of the second plurality of optical client signals multiplexed together after they are separated from the separating unit (i.e., Fig. 3, col. 3, lines 25-52). Based on this teaching, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the first plurality of optical client signals are multiplexed as a WDM provided to the multiplexing unit and keeping the wavelengths of the second plurality of optical client signals multiplexed together after they are separated from the separating unit as taught by Toyohara in the system of Prior Art Figures 1 and 2. One of ordinary skill in the art would have been motivated to do this since allowing to provide an optical communication system with high speed and high capacity.

Regarding claim 9, the combination of Prior Art Figures 1 and 2 and Toyohara teaches an amplifier collectively optically amplifying the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit (i.e., Fig. 3 of Toyohara, col. 3, lines 25-52).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 1 and 2 in view of Toyohara (US Patent No. 6,271,948) and further in view of Zhou et al (US Patent No. 6,445,850).

Regarding claim 10, Prior Art Figures 1 and 2 as modified by Toyohara teaches all the aspects of the claimed invention except fails to teach a compensator that collectively optically compensates dispersion of the plurality of wavelength division

multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit. However, Zhou in US Patent No. 6,445,850 teaches a compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit (i.e., Figs. 2c, col. 9, lines 25-50). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit as taught by Zhou in the system of Prior Art Figures 1 and 2 modified by Toyohara. One of ordinary skill in the art would have been motivated to do this since allowing compensating the dispersion of the optical signals.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art Figures 1 and 2 in view of Toyohara (US Patent No. 6,271,948) and further in view of Zhou et al (US Patent No. 6,445,850).

Regarding claim 11, Prior Art Figures 1 and 2 as modified by Toyohara teaches all the aspects of the claimed invention except fails to teach a compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit. However, Zhou in US Patent No. 6,445,850 teaches a compensator that collectively optically compensates dispersion of the plurality of

wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit (i.e., Figs. 2c, col. 9, lines 25-50). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the compensator that collectively optically compensates dispersion of the plurality of wavelength division multiplexed optical client signals as the WDM signal before the WDM signal is received by the multiplexing unit as taught by Zhou in the system of Prior Art Figures 1 and 2 modified by Toyohara. One of ordinary skill in the art would have been motivated to do this since allowing compensating the dispersion of the optical signals.

Allowable Subject Matter

11. Claims 1 and 6 are allowed.

Response to Arguments

12. Applicant's arguments with respect to claims 1, 6 and 8-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

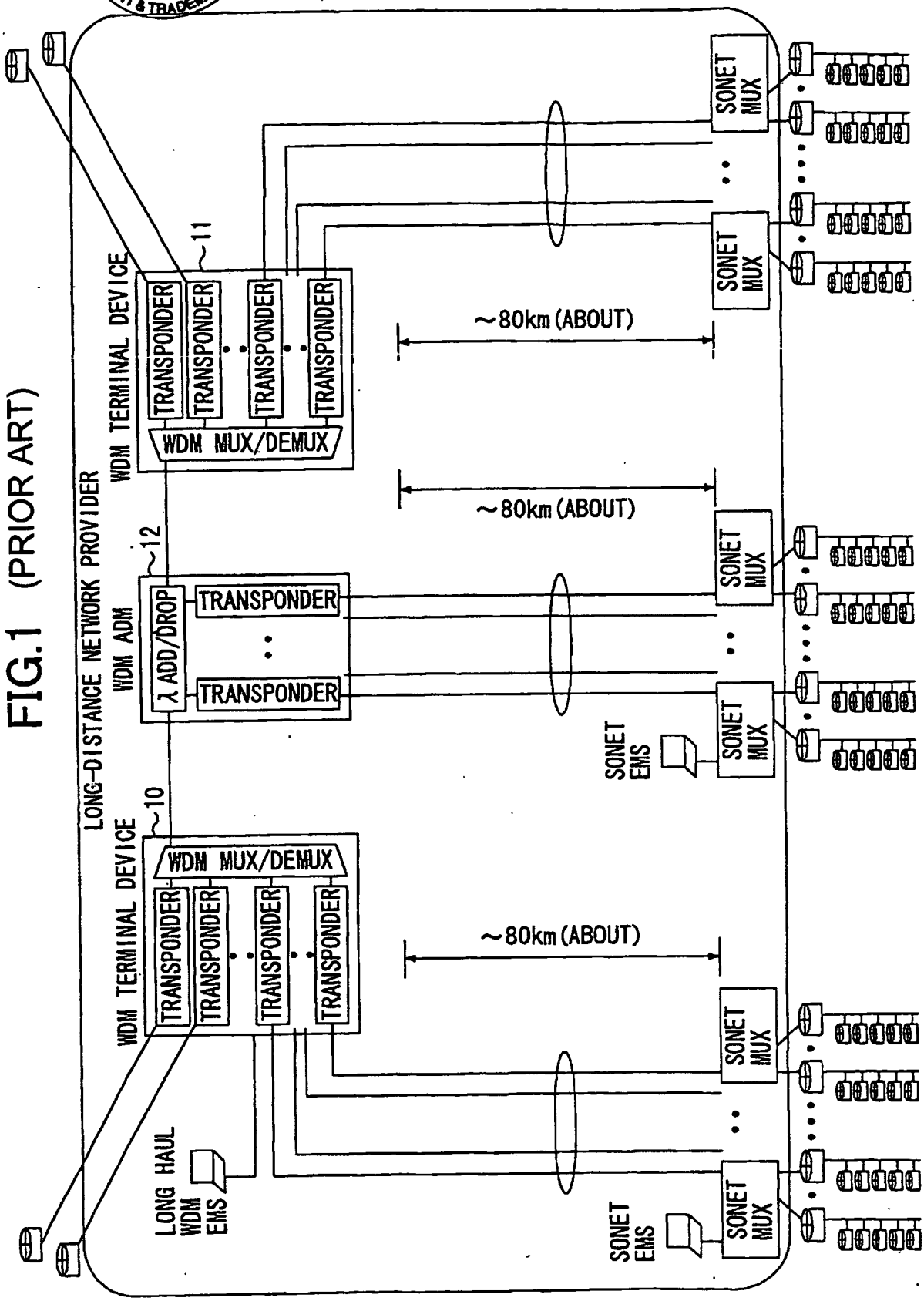
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

HANH PHAN
PRIMARY EXAMINER

REPLACEMENT SHEET

Approved
HP
09/12/06

FIG.1 (PRIOR ART)



Approved
09/12/06

FIG.2 (PRIOR ART)